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BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Southern California Edison Company's Application For Approval of Embedded Energy Efficiency Pilot Programs for 2007-2008.	Application 07-01-024 (Filed January 16, 2007)
And Related Matters.	Application 07-01-026 Application 07-01-029 Application 07-01-030

ASSIGNED COMMISSIONER RULING AND SCOPING MEMO

This ruling follows a prehearing conference, held January 30, 2007, and four subsequent full-day workshops conducted by the Administrative Law Judge (ALJ), as well as staff from the Commission's Division of Strategic Planning and Energy Division. In this ruling, I affirm the preliminary determination that this is a ratesetting proceeding, identify the issues to be resolved in these consolidated dockets, direct the utilities to submit supplemental testimony, and set a schedule for the remainder of the proceeding.

Background

Pacific Gas & Electric Company (PG&E), San Diego Gas & Electric Company (SDG&E), Southern California Gas Company (SoCalGas), and Southern California Edison Company (SCE) filed the subject applications in compliance with a ruling which I issued on October 16, 2006, in Rulemaking (R.) 06-04-010. I am the assigned Commissioner in that proceeding, as well.

In Decision (D.) 05-09-043, which preceded the issuance of R.06-04-010, the Commission directed me to:

> explore the issue of counting embedded energy savings associated with water efficiency by informal or formal procedural vehicles in our rulemaking proceeding ….We recognize that there are many tasks and priorities for the coming weeks and months set forth in today's decision, and therefore leave to the Assigned Commissioner to determine the appropriate schedule for considering this issue further. (mimeo., pp.168-169)

The Commission cited this language in R.06-04-010. In the subsequent scoping ruling for that proceeding, dated May 24, 2006, I determined that it would be appropriate to convene workshops and receive subsequent written comments addressing the following issues:

(1) Should the Commission's Energy Efficiency Policy Rules be modified to include as measure/program benefits the embedded (upstream) energy savings associated with energy efficiency measures that also reduce water usage (e.g., clothes washers that save both energy and water)? Why or why not?

(2) If so, what approach (methodology and rigor) should be taken for counting those savings on an ex ante (forecasted) basis and for verifying and truing up those savings ex post (after measure installation)? Should this counting be undertaken for the 2006-2008 program cycle, or on a prospective basis when embedded savings are incorporated into the potentials studies and the updated savings goals for 2009-2011? Are there other key implementation issues that need to be addressed?

These two general areas of inquiry allowed for an initial focus on the measures and programs that the energy utilities are administering with the benefit of currently authorized energy efficiency portfolio funding, which I found to be the logical focus at the initial stage of the rulemaking proceeding. I also included, as Attachment 1 to the scoping memo, a list of more specific issues

related to these general questions to be considered at the informal workshops and in written comments.

I further stated that at some point in the rulemaking or other forum, as appropriate, the Commission should begin looking at the broader context for water-related savings, including the implementation of new water conservation measures not currently undertaken by either energy or water utilities, as well as related issues such as co-funding. Therefore, I asked the utilities and interested participants to spend some time during the workshops addressing the process for embarking on a Commission inquiry into these matters.

Interested parties participated in a workshop held in Downey, California on July 17, 2006. The participants discussed specific policy questions set forth in the R.06-04-010 scoping ruling. With the benefit of the results of the workshop, parties filed opening comments by July 31, 2006, and reply comments by August 18, 2006.

Options for Reducing the Energy Footprint of Water Use

As I reported in my October 16, 2006 ruling, commenting parties agreed that (1) by saving water or developing and treating it more efficiently, it is possible to produce significant energy savings, (2) energy efficiency programs could be more effective if the electric and gas utilities were to promote water efficiency improvements that would provide cost-effective energy savings, and (3) there is a shared sense of urgency to begin accounting for this energy savings potential and incorporating it into the design of the energy efficiency programs.

In their filed comments, parties described two types of energy savings: cold water savings (related to the production, transportation and treatment of water) and hot water savings (those related to reducing the use of energy to heat water for end-use purposes). It is the former (which include "upstream" as well

as "downstream" savings) that comprise the embedded savings opportunities that are the focus of this inquiry. The commenting parties identified four ways to reduce net energy consumption related to water use by capturing embedded savings:

1. Conserve water;
2. Use less energy-intensive water (gravity-fed or recycling versus groundwater, aqueducts or desalination);
3. Make current delivery and treatment systems more efficient; and
4. Produce more energy through water delivery and treatment.

I observed that while any of these methods would reduce the net consumption of energy related to water use, the first three appear to be most consistent with an energy efficiency strategy. Those options reduce the amount of energy required to use water. The fourth option reflects an opportunity to use water delivery and treatment systems to produce more usable energy. This would likely be in the form of small hydroelectric generating facilities along water delivery paths, or methane gathering at treatment facilities. Such projects would best be explored in a distributed generation, or renewable energy context.

Near-Term Strategy

While it is clear to all participants that the Commission should encourage strategic integration of water and energy efficiency efforts, there is less certainty as to what changes the utilities can or should incorporate in the current program cycle. There is a debate as to whether counting embedded energy savings related to water conservation now would produce real new benefits or simply give credit for savings that would have occurred anyway. Another matter of considerable discussion is that the amount of energy needed to produce, convey, and treat water differs dramatically from place-to-place. For example, the San Francisco waterworks are often considered to be net energy producers because the water is largely conveyed by gravity and the main dam system (Hetch Hetchy) includes hydroelectric generators. By contrast, many communities along the California aqueduct are dependent on pumps to deliver

water. Groundwater pumping consumes a lot of energy, while water recycling consumes less. Desalination plants are highly energy-intensive because of the need to force water through a series of filters. A further level of complexity relates to the fact that pumped water often moves through more than one energy utility service territory. If a utility near the end-users spends money to reduce water use, some or all of the benefits may accrue to customers in the service territory of an upstream utility.

Most parties asked the Commission to approve some type of pilot program for implementation during the 2006-2008 program cycle to explore the potential for future programs to capture water-related embedded energy savings. In order to improve the likelihood of implementing new programs in the near future, in the October 16, 2006 ruling, I directed the utilities to submit applications for the approval of pilot programs consistent with the following criteria:

1. No later than January 15, 2007, PG&E, SDG&E, SoCalGas, and SCE were to file applications seeking approval of one-year pilot programs, as described below, to begin July 1, 2007.
2. Each utility was to form a partnership with one large water provider to implement a jointly-funded program designed to maximize embedded energy savings per dollar of program cost. I encouraged the utilities to work with municipal water utilities to the extent that they appear to be the most promising partners. However, the process was open to all water utilities and agencies in the utility service territories.
3. I suggested that funding for these programs would be separate from the funding established for 2006-2008 programs. I encouraged the utilities to work together to develop a common program and funding approach, and suggested that they propose limiting the statewide energy utility cost for these pilot programs to approximately $10 million.
4. While it would be important to count embedded energy savings related to this effort, and to calculate any such savings related to existing programs, I directed the utilities not to seek

> credit for these savings as part of any rewards or penalties related to the 2006-2008 period. I stated that the applications should include proposals for counting the savings for the purpose of understanding program benefits, rather than to affect rewards or penalties.

I further directed the utilities to schedule a planning workshop during the second quarter of 2007 to determine what needs to be done to prepare for full incorporation of water-related programs during the 2009-2011 planning period. This workshop would address a methodology to estimate the magnitude of energy and dollar savings at various localities (and review proxy energy savings developed by the California Energy Commission as part of its 2005 Integrated Energy Policy Report[1]); evaluation, measurement and verification; procedural guidelines; outreach; and training.

In addition, in D.06-12-038, which adopted budgets and broadly addressed issues related to low income energy efficiency programs, the Commission directed PG&E, SCE, SDG&E and SoCalGas to file proposals for "energy efficiency water conservation programs for low income customers." (D.06-12-038, mimeo, p. 17). The Commission stated, "[T]he design of the low income programs should incorporate water savings measures that could enhance the overall cost-effectiveness of the energy conservation programs while providing additional benefits to low income customers." (Id., pp. 16-17). I had encouraged the Commission to include this directive in D.06-12-038 and anticipated that each utility would comply with it in its pilot application.

[1] 04-IEPR-01E

The Pilot Proposals

In response, the energy utilities, water agencies, and other stakeholders set to work, and all four energy utilities successfully met the deadline for filing their applications.[2] I applaud the utilities and their water agency partners for their efforts in putting these applications together. The utilities each offered to conduct a one-year pilot program, in conjunction with partner water agencies. The SDG&E proposal includes pilot programs offering the following measures:

1. Low Income Multifamily High Efficiency Toilet Replacement;
2. Landscape Management Efficiency Improvements;
3. Large Customer Water Audits;
4. Water Recycling Retrofits; and
5. Joint Marketing and Outreach.

The SoCalGas proposal includes these measures:

1. Low Income Multifamily High Efficiency Toilet Replacement; and
2. Joint Marketing and Outreach.

PG&E proposes a pilot program that includes few specifics. It would offer audits to commercial, institutional, and industrial customers in the service territories of three different water agencies and provide a financial incentive for the installation of certain water-saving measures. SCE proposes:

1. Low Income Direct-Install High Efficiency Toilet Replacement;
2. Industrial Water Efficiency Audits;
3. Advanced PH Controllers for Cooling Towers;
4. Water-Based Irrigation Controllers;

[2] January 15, 2007 was a state holiday, and the energy utilities each made timely filings the following day.

5. Residential Indoor and Outdoor Measures for Lake Arrowhead Customers;

6. Expanded Green Schools/Green Campuses Program, including High Efficiency Toilet Incentives;

Protests

In response to the pilot program applications, the Inland Empire Utilities Agency (Inland Empire) filed comments, while the Division of Ratepayer Advocates (DRA) and The Utility Reform Network (TURN) filed protests. DRA and TURN offer detailed objections to aspects of each of the proposed pilot offerings.

Inland Empire argues that the goal of the pilot program is not to ensure energy savings, but to determine if energy savings can be realized through future investments. For this reason, Inland Empire pleads for a broad perspective on the pilot programs.

DRA acknowledges that water conservation is an important concern for California and supports the goal of developing and expanding best practices and existing programs to realize the substantial incremental benefits of joint water and energy resources and infrastructure management. However, DRA points out that the purpose of the energy efficiency program is to conserve energy, not water. The utilities' primary obligation in overseeing energy efficiency programs is to fund programs that will directly benefit their ratepayers, as well as to displace the procurement of more costly and emission-intensive fossil fuels. For this reason, the Commission has prioritized energy efficiency first in the loading order.

DRA argues that given the complexity of the water purchase and conveyance system coupled with the types and sources of energy saved, a program that is geared toward statewide savings would need to be integrated at

a statewide level that included all private and municipal energy and water companies. As DRA sees it, the only workable process to compel statewide participation could come from the Legislature. DRA draws a comparison to the legislative requirement that all Load Serving Entities – public and private – provide their energy forecasts to the CEC.[3]

DRA asserts that for the purpose of this pilot exercise, the energy efficiency program can only be responsible for conserving water that saves energy within respective energy utility territories to benefit ratepayers who support the energy efficiency programs, and that the outcome of this pilot for portfolio planning should not allow the energy utilities to favor non-utility programs over those that directly benefit their own ratepayers. DRA argues that a useful and appropriate pilot program should produce data that provides for a meaningful comparison of energy-embedded water conservation programs to traditional energy efficiency programs to determine if there is a place for water conservation in the overall energy efficiency strategy.

TURN protests the applications, offering the following three arguments. First, each application lacks essential information, without which the Commission can neither assess potential ratepayer benefits from the pilots nor evaluate whether the pilots will help answer fundamental questions about water-embedded energy as a demand side resource for energy utilities. Second, the applications do not appear to satisfy the Commission's directive regarding low

[3] Assembly Bill (AB) 2021 requires Load Serving Entities to submit their energy efficiency forecasts to the CEC. AB 1723 requires such entities to submit their departing load forecasts to the CEC as part of its integrated planning report as well as to meet minimum planning reserve and reliability criteria.

income customers. Finally, the applications conflict with existing Commission energy efficiency policies. TURN additionally protests PG&E's proposed funding mechanism.

Pilot Program Objectives

In a ruling dated February 16, 2007, after considering the comments and concerns offered by various parties at the prehearing conference, the assigned ALJ Steven Weissman and I encouraged the parties to consider discussing the pilot proposals, and any potential modifications, with the following objectives in mind:

1. Reduce energy consumption related to water use in a manner that should prove to be cost-effective for all of the customers of the sponsoring energy utilities;
2. Create a methodology for calculating cost-effectiveness and evaluating water-derived energy efficiency programs;
3. Determine if, in fact, it is cost-effective to save energy through programs that focus on cold water;
4. Better understand how energy is used in the California water system;
5. Test a diverse set of water energy programs and measures, with particular emphasis on new technologies and low-income customers;
6. Better understand what programs and measures are likely to save water and energy;
7. Provide the basis for meaningful ex-post project assessment;
8. Stimulate new partnerships; and
9. Better understand the potential benefits of pursuing each of the strategies identified in the October 16, 2006 ruling:
    a. Conserving water;
    b. Switching to less energy-intensive water sources; and
    c. Increasing the energy efficiency of current water delivery.

Workshops

At the prehearing conference, various parties expressed an interest in having the Commission convene additional workshops to further understand and develop the pilot program proposals. TURN and DRA asked that we begin this process by offering a training session designed to enhance the understanding of energy experts as to the nature of the water utility industry. In the ruling dated February 16, 2007, the ALJ and I scheduled a training workshop to be held on February 26, 2007, as well as workshops on February 27th and 28th. The objectives were as follows:

1. **First Day**: The objective of this workshop was to provide a common level of industry specific information to facilitate a constructive discussion of the pilot proposals.

2. **Second Day**: The objective of this workshop was to provide greater clarity about the goals of the program and the standard for reviewing the adequacy of the proposals. In addition, the participants discussed a strategy for the presentation of issues in the workshops to be held on subsequent days.

3. **Third Day**: The objective was to create greater assurance that the pilot programs would be cost-beneficial.

In the February 16th ruling, we also anticipated holding two additional days of workshops: one to discuss program modifications and one to consider strategies for ensuring that any future energy utility water conservation efforts would be cost-effective from the perspective of their customers. Although we have yet to schedule these two workshops, the staff did conduct a fourth workshop on March 16, 2007 to discuss a straw proposal for a program redesign strategy intended to support more accurate testing and measurement.

Questions the Utilities Propose to Answer Through the Pilot Programs

The workshops led to very constructive discussions about the objectives of the program and the likelihood that the program, as proposed, would produce information that could guide future project development. One result of the workshops is that the utilities pledged to develop a list of questions that they would answer through the pilot programs. PG&E distributed the list of questions to all parties electronically on March 29, 2007, and it is attached to this ruling.

Scope of the Proceeding

The primary task of the Commission in this consolidated proceeding is to determine whether it should approve water conservation energy efficiency pilot programs. The purpose of such programs would be to determine what role, if any, water conservation and the use of less energy intensive water should play in an overall energy efficiency strategy.

Given these goals, any pilot program must be designed to enable the Commission to decide whether water conservation and less energy intensive water measures should be allowed to compete for utility energy efficiency dollars. In order to do this, the pilot program results must demonstrate that saving and using less energy intensive water, in fact, saves energy – not in the abstract, but in application.

From the outset, it is safe to say that water measures will not be competitive for energy efficiency program dollars if they are not cost-effective mechanisms for achieving energy efficiency savings. A critical element of a meaningful comparison is the development of a cost-effectiveness methodology for water measures comparable to that employed for the consideration of other energy efficiency measures. The embedded energy in water methodology should be the product of a coordinated effort between the Commission and other

stakeholders in conjunction with the pilot programs. The utilities should use the pilots to test and refine the methodology.

The Commission will review the pilot proposals to determine whether they are reasonably likely to achieve these goals, and will want to be satisfied that the proposals are consistent with the nine program objectives that I set forth in my ruling dated February 16, 2007 and repeated above. As I stated in the October 16, 2006 ruling issued in R.06-04-010, we will want to determine whether the pilot programs are designed to maximize embedded energy savings per dollar of program cost. Consistent with the stated objectives, the intervenors have posed various additional questions that are properly within the scope of this proceeding:

1. Would the pilots, if approved, result in useful data?
2. Would the results of the pilots support planning and analysis for future portfolios?
3. Would the pilots identify the most promising opportunities for future savings?
4. Should the pilot activities be limited to areas of highest expected energy savings?
5. Should natural gas utilities be required to save therms of gas through their pilot programs?
6. Who should oversee EM&V activities (the Energy Division staff, or a separate utility-selected panel of experts), and what is required to remain consistent with the Commission EM&V goals as expressed in D.05-04-051?
7. When should the pilots begin and end?
8. What actions, if any, should the Commission take with regard to potential conflicts of interest in pilot programs?
9. Should the utilities be required to ensure that the low-income elements of the pilot programs provide direct benefits to low-income customers?

10. Are there unintended consequences that could negate desired energy savings?
11. Should energy savings be counted for incentive purposes?
12. Should the Commission approve PG&E's proposed funding mechanism?

These questions, as well as the matter of the pilot programs' consistency with the objectives set forth in the October 16, 2006 and February 16, 2007 rulings, comprise the scope of this proceeding.

After having reviewed the applications, and considered comments offered at the prehearing conference, in protests, and throughout the workshops, I have concluded that the proposals in their current form do not sufficiently answer these questions. Therefore, through this ruling, I am directing the utilities to provide supplemental testimony proposing program revisions, as necessary, to meet the stated objectives. At a minimum, the supplemental testimony must address the following concerns:

First, thus far, the applicants have not sufficiently addressed the cost-effectiveness of their proposed pilot programs. They shall do so in the supplemental testimony. The applicants shall compare the cost for the various measures with the expected energy savings within the sponsoring energy utility's service territory. For the purposes of this discussion, that comparison identifies the relative cost effectiveness of a proposed program. Later this month, the Energy Division will release a cost-effectiveness "calculator" that can be used to undertake this assessment. The staff will then hold a workshop to discuss the use of the calculator. In the supplemental testimony, the applicants shall address the overall cost effectiveness of the proposed pilots, and propose program modifications, as appropriate, to improve cost effectiveness. If the overall pilot program is not expected to achieve a cost effectiveness ratio greater

than 1.0, the applicants shall explain why it should nonetheless be approved. The applicants may also address the suitability of the calculator.

Second, there are four categories of information that the utilities shall include in their supplemental testimony. Below are the four categories and their specific requirements. For all estimates given, the utilities shall indicate the source and methodology.

I. Information needed to determine cost-effectiveness

A. Identify, by measure name, all of the measures to be included in the program (e.g., specify residential ULF toilet, commercial ULF toilet, commercial urinal, cooling tower PH sensor and treatment improvements, etc.);

B. Measure target sector (commercial/building type, residential/ SF-MF-MH, etc.);

C. Measure water savings by gallons per day (can be an estimated average or a range). Must include summer/winter variation if this information is important to understand total annual water savings;

D. Measure cost (end user cost - for rebate programs - including equipment and installation, or direct install costs);

E. Measure life (for replace on failure such as rebate programs the number of years at which 1/2 the installation are expected to still be in place, for early retirement - such as direct install - the average remaining life of the replaced equipment);

F. Estimate of net-to-gross ratio indicating the fraction of participants not expected to be free riders;

G. Administrative costs for each measure (rebate processing, DI contractor management, program overhead, partner costs, marketing, etc);

H. Partner dollar contributions for each measure for each category (administrative costs, rebates or incentives, marketing, etc.) and any restrictions or conditions attached to these financial contributions;

I. Expected geographic distribution of measure installs - maybe just evenly over entire service area or focused some measures on some specific climate zones or counties or cities;

J. Identification of third party implementers planned for each program and any contracts these third parties currently have with the IOUs; and

K. Description of how participant funds will collected and used in off-setting program costs, and which specific costs will be offset (i.e. direct-install participants charged a co-pay to defray equipment installation costs). If no participant co-pays will be collected please state so.

II. Description of the paper studies the utility plans to undertake

A. The emphasis and goals of each study and for the studies overall

B. The number of studies proposed

C. The estimated budget for each study

D. The estimated start and complete date of each study

E. A summary scope of work statement and list of deliverables for each study

F. A summary list and explanation of data to be collected in the studies (including where the data will be found, methods for collection of the data, and type of data to be collected)

III. Description of before/after measurement that would be performed in order to prove a program effect (that saving and using less energy intensive water saves energy) as a result of measure installations

A. Information showing the establishment of control and treatment groups to illustrate the effects of the program (the control group in this case would most likely be historical information on program participants to establish a baseline pattern of water and or energy usage)

B. A description (and identification) of the paper studies that would aid in proving a treatment effect and the role that they would play in this process.

C. Participant water data on a daily, weekly and seasonal basis before and after the measure is installed to determine the effect of the measure on the participants' water use.

D. Water agency energy use data including energy use profiles on a daily, weekly, and seasonal basis to determine how water savings in different pressure zones, sectors, and at different times can affect energy use.

IV. Present a revised budget that would reserve 18% of the pilot budget (as proposed in the January 15th, 2007 applications, EM&V accounts for 20% of the total pilot budget) for impact evaluation work.

All parties will have an opportunity to file comments on the supplemental testimony, the overall pilot proposals, and the utility pilot questions attached to this ruling. In commenting on the questions, parties should indicate whether they believe these are the right questions for the utilities to address through the pilots, how if at all they would modify the questions, and whether there should be an obligation for the utilities to adequately address them through the pilot programs. In the comments, parties should also indicate whether they feel there are disputed issues of fact requiring responsive testimony. It is my hope that there will not be a need for evidentiary hearings. However, the assigned ALJ and I will address that issue after reviewing the comments and determining whether testimony can be received into evidence by stipulation.

Schedule

My hope had been to have pilot programs in operation by July 1, 2007. It was with this goal in mind that I directed the utilities to file their applications by the middle of January. I would like the results of the pilot programs to inform programmatic decisions for the 2009-2011 energy efficiency program cycle. While a pilot program terminating in the middle of 2008 might be too late to affect the initial planning process for that program cycle, it would hopefully improve the knowledge base related to water conservation strategies while the planning was still underway. However, timeliness is only a factor if the pilots are likely to produce meaningful results. The parties need to take additional

steps to increase the likelihood of useful results before I will ask the Commission to pass judgment on the proposals. I am forgoing the potential for a July 2007 kickoff in pursuit of better programs.

The following schedule will bracket activities related to these applications as we move forward.

Event	Anticipated Schedule	Variation 1	Variation 2
Utilities Release Pilot Questions	April 20	April 20	April 20
Release Cost-Effectiveness Calculator	April 27	April 27	April 27
Cost-Effectiveness Workshop to Discuss Calculator	May 7	May 7	May 7
Utility Supplemental Testimony Proposing Revised Pilot Programs	June 14	June 14	June 14
Workshop Addressing the Supplemental Testimony	June 20	June 20	June 20
Opening Comments on Proposals and Utility Pilot Questions	June 29	June 29	June 29
Reply Comments	June 29	June 29	June 29
Intervenor Testimony (if needed)	N/A	July 20	July 20
2nd Prehearing Conference	July 13	August 6	August 6
Evidentiary Hearing (if needed)	N/A	N/A	August 20
Concurrent Briefs (if needed)	N/A	N/A	September 6
Issue Proposed Decision	September 4	November 20	TBD
Target Commission Decision Date	October 4	December 20	TBD

The anticipated schedule reflects the assumption that there are no factual disputes requiring DRA or intervenor testimony, or evidentiary hearings, and that the parties will stipulate to the Commission receiving the utility testimony as evidence without cross-examination. Variation 1 reflects an adjusted schedule in the event that DRA or an intervenor offers written testimony after having

demonstrated the existence of a potential significant factual dispute. Variation 2 allows for evidentiary hearings if the parties decline to stipulate to receiving both the utility testimony and that of DRA or intervenors without cross-examination.

Filing, Service, and Service List

Parties must file certain documents as required by the Rules or in response to rulings by either the assigned Commissioner or the ALJ. These documents must be filed with the Commission's Docket Office and served on all persons on the service list with the status of appearance or state service. Please note that the Docket Office does not appear on the service list. Article 1 of the Rules contains all of the filing requirements.

While parties frequently file documents with the Docket Office in paper form, they may serve those documents to other parties in electronic form, pursuant to Rule 1.10, unless specified otherwise. Please note that parties must serve electronic documents in either PDF or Word form. Parties often prefer PDF files because that process preserves pagination. However, be aware that a PDF file must be in searchable format. Scanned documents are not acceptable. Further, ALJ Weissman prefers using Word files whenever possible. Even when providing PDF files to all parties, you are encouraged to send a Word version to the ALJ. Paper format copies, in addition to electronic copies if made available, shall be served on the assigned Commissioner, the ALJ, and Energy Division representatives.

In addition to the traditional process of filing paper copies with the Docket Office, electronic filing is now available for use in all proceedings. Using this method can save a great deal of time and expense. To learn more about this option, visit the webpage at this address: http://www.cpuc.ca.gov/static/efiling.htm, or click the E-File icon near the

bottom of the Commission's home page. If you have further questions, please contact the Public Advisor's office.

The official service list for this proceeding is available on the Commission's web page. Parties should confirm that their information on the service list and the comma-delimited file is correct, and serve notice of any errors on the Commission's Process Office, the service list, and the ALJ. Prior to serving any document, each party must ensure that it is using the most up-to-date service list. The list on the Commission's web site meets that definition.

IT IS RULED that:

1. The scope of this proceeding is as set forth above in this ruling.
2. The schedule of this proceeding is as set forth above in this ruling. The Administrative Law Judge (ALJ) will issue subsequent rulings providing specific starting times, schedule changes, and locations for hearings, workshops, and conferences, as appropriate.
3. The applicant utilities shall submit supplemental testimony and exhibits as set forth herein.
4. This ruling confirms the Commission's preliminary finding in Resolution ALJ 176-3186 that the category for this proceeding is ratesetting and that hearings are necessary. This ruling, only as to category, may be appealed under the procedures in Rule 7.6.
5. The ex parte rules as set forth in Rule 8.2(c) of the Commission Rules of Practice and Procedure and Pub. Util. Code § 1701.3(c) apply to this proceeding.
6. Administrative Law Judge Weissman is the principal hearing officer.
7. All e-mail communications concerning this proceeding shall include the following subject line: A.07-01-024 et al Water Energy Pilots:[subject of the communication].

Dated April 23, 2007, at San Francisco, California.

/s/ DIAN M. GRUENEICH
Dian M. Grueneich
Assigned Commissioner

Attachment

QUESTIONS THE WATER-ENERGY PILOT PROPOSES TO ANSWER

Overview

The Water-Energy Pilots proposed by the Investor-Owned Utilities (IOUs) will be designed to explore the potential for a water embedded energy (WEE) savings program by examining, in sequence, the: 1) technical potential; 2) economic potential; and 3) programmatic potential for carrying out an effective water embedded energy savings strategy.

- **Technical potential** refers to the expected ability of various measures to achieve water-embedded energy savings *and* to the ability to evaluate and attribute the energy and cost savings from measures. In other words, technical potential involves what measures work, to what extent, and if and how they can be measured.

- **Economic potential** refers to the expected ability of various measures to achieve cost-effective savings as defined by various cost tests (to determine which measures are cost-effective).

- **Programmatic potential** refers to the expected ability of measures to be effectively delivered as a utility program. In other words, can the cost-effective measures be successfully implemented in the given time frame?

The pilots will provide resources to support *both* on-the-ground implementation of water conservation measures to capture WEE and a Water-Energy Study (WES) that will be overseen by a Blue Ribbon Panel (composition to be determined). For the WES, the study design would ultimately be approved by the Blue Ribbon Panel, but the study is expected to run concurrently with the on-the-ground implementation to examine multiple issues using multiple inputs, including data available from natural fluctuations in water use and data from the pilot implementation. Issues included in the WES would include evaluating the on-the-ground implementation programs implemented as part of the pilot, analyzing existing data, examine methods for quantifying energy and water relationships, survey the existing body of research on the topic, etc. The WES would develop information and methodologies to be used in broad rollout statewide of a Water-Embedded Energy program to deliver energy savings.

Together, these two elements of the pilots (on-the-ground implementation and the Water-Energy Study) will provide answers to a set of questions listed below. Note that because this is a pilot exploring new ground, we do not know what information we will encounter and cannot guarantee the answers, even though both the study and the on-the-ground implementation would be designed to obtain the data needed to answer these questions.

Technical potential

Measures

1) Which measures or bundle of measures have the technical ability to be deployed effectively at a programmatic level (e.g. which measures are commercially available and viable)?

   How pilot will answer: Screening of available measures by third party contractor for technical feasibility, as part of the WES. All measures deployed in pilot will be evaluated for effectiveness (or a subset of the measures, if it is determined that it is not cost-effective to evaluate all measures independently and the evaluations of some measures could be generalized to others).

2) How can the additional water-embedded energy savings be calculated for existing energy programs that already save on-site water?

   How pilot will answer: WES to develop methodology for calculating WEE for representative sample of existing programs. The methodology would be applied to the on-the-ground measures and developed with the intent for use in a statewide program rollout of water-embedded energy.

3) What emerging (water-saving) technologies (including existing technologies used in different ways and truly new technologies) might be effective in the near term and in which sectors could they be deployed?

   How pilot will answer: Screening of available technology as part of the WES.

Verification and Attribution

4) What methods are available for quantifying the amount and the value of water-embedded savings? What are the costs and validity (level of accuracy) of these methods? Are the methods at the project, program, or water utility subarea level? How can such methods be developed, improved or refined to provide greater resolution?

How pilot will answer: As part of the WES, existing methods will be identified, or new methods developed, based on available information regarding energy costs related to pumping, transporting, storing and treating water and wastewater. The new methods would be applied to the on-the-ground implementation of measures.

5) What is required to create "DEER-equivalent" data for measures designed to save water-embedded energy (e.g. the water and/or energy data about the incremental savings, incremental costs, measure life, etc.) be developed? What is required to create guidance, rules, and or protocols on determining WEE?

   How pilot will answer: Analyzed in WES. If there are sufficient resources and time, the WES would develop the data and guidance.

6) What is the average WEE intensity for participating customers that incorporates both the upstream and downstream energy at the most specific level of measurement available (e.g., pressure zone upstream and wastewater treatment facility downstream)?

   How pilot will answer: The WES will analyze historical energy data from water utilities (SCADA or other source) to develop the average WEE. A pressure zone can be large or small depending on geography (e.g. several customers if the terrain is hilly or an entire city if the terrain is flat). If an area does not have such data, the WES can develop baseline WEE intensity.

7) What is the marginal energy associated with water use fluctuations related to customer's participation in on-the-ground implementation of water measures (e.g. changes in water volume (water savings) in their pressure zone and wastewater treatment facility)?

   How pilot will answer: The WES will analyze historical data from water utilities (SCADA or other source) on the marginal energy associated with participation in on-the-ground measures.

8) What are the time-dependent water savings impacts (load shapes)? What are the time-dependent WEE impacts (load shapes)? What are the major characteristics of the operations of water agencies that affect the latter?

   How the pilot will answer: Data provided by water utilities and analyzed in WES.

9) Are there natural gas embedded energy savings impacts? Can they be measured?

   How the pilot will answer: The WES will analyze data provided by water and gas utilities, and will look at impacts both in and out of the gas utilities service territory to determine if there is savings potential, especially given that the CEC report did not examine gas impacts.

10) What is the total water-embedded energy saved by measures? What is the impact at the local level and statewide? What methodologies can be developed to calculate and/or attribute those energy savings to IOU and other energy providers?

    How the pilot will answer: Included in the WES.

Economic Potential

1) What is the cost-effectiveness of counting the WEE: 1) in the IOU service territory; 2) saved across all IOU territories, and 3) of the entire statewide water cycle?

   How the pilot will answer: The WES will explore how the cost-effectiveness changes under different scenarios, as well as various policy options for attributing costs and savings (e.g. can policies be developed to allow non-IOU energy providers to pay for their portion of the energy saved by a program implemented by an IOU-water agency partnership?).

2) What are the water load and energy use profiles for the pressure zone and wastewater treatment facility or facilities associated with expected pilot program customers or groups of customers?

   How pilot will answer: WES will develop with data to be provided by water utilities.

3) What is the average IOU energy embedded in average water used by specific customers who might be likely to participate in a statewide WEE program?

   How pilot will answer: The WES will analyze historical data from water utilities (SCADA or other source) to determine the average WEE for customers (this creates a baseline to which the data from question 4 can be compared). The average WEE would be determined by developing estimates for the water-embedded energy for each stage in the water life-cycle, multiplying those estimates by the average amount of that energy provided

by the IOU (vs. other energy provider), and then adding the IOU energy for each stage of the life-cycle.

4) What is the variability of IOU energy embedded in water (as compared to average IOU embedded energy) used by specific customers?

   How pilot will answer: The WES will analyze data from water utilities (SCADA and other) to determine what fluctuations exist, if any, such as seasonal variability, or differences due to pressure zone, time of day, or water-year type (e.g. dry versus wet). If the variability is small, it is likely that average IOU embedded energy figures could be used to calculate accurate energy savings from water conservation measures. If the variability is large, such calculations may need factors that account for the variability.

5) What is the estimated market potential, by customer type, sub-sector and end use, for a statewide program designed to capture water embedded energy? With what precision can this potential be determined? What additional information, if any, is needed to improve the precision of the potential estimate?

   How pilot will answer: Economic assessment developed as part of the WES will identify which customer types have the highest embedded energy and segment them by geographic information.

6) Based on analysis of the technical and economic potential, which measures or bundles of measures, by technology and end use, should be considered for development into large-scale utility programs? Which should no longer be considered?

   How pilot will answer: The IOUs will conduct preliminary assessments to determine the customers and measures to include in the on-the-ground implementation portion of the pilot. The WES will incorporate the results of the on-the-ground programs but will evaluate a wide variety of measures beyond just those implemented during the pilot phase.

7) Are the measures cost-effective? How do they compare to traditional EE measures? Do the measures produce additional benefits not captured by traditional EE measures and cost-effectiveness calculations?

   How pilot will answer: The WES will calculate and analyze the cost-effectiveness.

Programmatic Potential

1) Which measures or bundles of measures can be delivered by a utility program? Which of these are cost effective?

   How pilot will answer: The WES will evaluate the potential to actually deliver measures found to have economic potential (e.g. programmatic potential entails whether sufficient numbers of customers are interested in the measures, whether they are available, whether utilities can deliver them, etc.). The WES will evaluate both on-the-ground implementation outcomes as well as measures not implemented during the pilot phase.

2) What is the estimated programmatic potential for the program, by end use and by market subsector? How much savings can be expected over time, and at what cost?

   How pilot will answer: The WES will use the information from the above question to determine whether there are sufficient cost-effective measures with technical, economic, and programmatic potential to put together a successful large-scale program. The WES would identify both the energy and water savings that could be expected over time from such a program.

3) What are the pros and cons of various delivery channels (e.g. rebates vs. direct install)? What are potential "lessons learned"? Are there situations in which one delivery channel is preferable? Why? Should staffing (number of staff, capabilities) be included in the assessment?

   How the pilot will answer: The WES will evaluate the effectiveness of the on-the-ground implementation programs in the service areas of the water partners in addition to other studies that have been done. The evaluation would be both quantitative (examining results of different channels) and qualitative (interpreting results to lessons learned).

4) What program elements should be "statewide" vs. "local"? How will successful marketing approaches differ? What generalizations can be made on the trade-offs between local variation and state-wide consistency?

   How the pilot will answer: Through observations of the effectiveness of the pilots in the service areas of the water partners. Assessments included in the WES.

INFORMATION REGARDING SERVICE

I have provided notification of filing to the electronic mail addresses on the attached service list.

Upon confirmation of this document's acceptance for filing, I will cause a Notice of Availability of the filed document to be served upon the service list to this proceeding by U.S. mail. The service list I will use to serve the Notice of Availability of the filed document is current as of today's date.

Dated April 23, 2007, at San Francisco, California.

/s/ ELIZABETH LEWIS
Elizabeth Lewis